REMARKS

Claims 1-24 remain active in this application. All have been amended.

Re Drawing Objection

In sections (1) and (2) of the official action, the examiner objected to the drawing under 37 CFR 1.83(a).

It is noted that this application was filed without a drawing and that no drawing has been required.

Since there is no drawing to correct, it is submitted that the objection to the non-existent drawing is moot. Accordingly, withdrawal of the objections to the non-existent drawing is believed to be in order and is respectfully requested.

Brief Review Of Applicant's Novel Problem and Solution:

Applicant has discovered a new problem with regard to visual artifacts in television receivers of a type having a line scanned display. This novel problem concerns:

(i) finding the source of the artifacts and

(ii) finding novel and economic solution thereof.

As to finding the source, applicant has discovered that video processing circuits in the receiver may be subject to leakage of periodic signals within the video pass band. (see, for example, page 2, lines 10, 28, 29, 31, page 3, lines 3, 15, page 4 line 7 and 13).

Applicant further discovered that the undesirable leakage effect is one which is unintentional (see page 4, lines 7 and 13) and therefore one which is uncontrollable by conventional means (e.g., redesigning the circuitry (see page 2, line 11 et seq) because of the extensive costs involved in circuit redesign.

Thus the objects of the invention reside both (1) in solving this new problem and (2) in doing it in such a manner as to avoid the need for circuit redesign. Advantageously, the novel problem is solved in the most economic way possible.

To this end, applicant envisioned an economic solution to the novel problem of leakage, which does not require circuit redesign, by the recited features (in independent Claim 1) of "selecting the frequency of the periodic signal, and predetermining the frequency of the periodic signal to be an odd harmonic of $f_h/2$".

Independent Claims 1 and 13 have been amended to place greater emphasis on the nature of the *novel* problem by clarifying that the problem concerns "leakage" effects and that the effects are caused by "stray" coupling by electrostatic/capacitance effects. All dependent claims have been amended to conform to the changes in their respective base claims.

Re: Claim rejections:

Independent method claim 1 and apparatus claim 13 were rejected under 35 USC 102(b) on the basis of Murakami et al., Collette and Martinez.

None of these references show or suggest either of the two aspects of the novel problem undertaken nor applicant's novel economic solution thereof as discussed below.

Murakami et al., for example, is directed to a different problem regarding luma/chroma separation and noise reduction and not to the problem, as clarified by the present amendment, of leakage caused by stray capacitance coupling.

It is the examiner's position that in Claims 1 and 13, the recited frequency selection is met by band pass filter 2 and the recited

predetermining the frequency is met by comb filter 3. Neither of these elements has anything to do with the problems undertaken in the present invention as recited in amended independent claims 1 and 13. The bandpass filter 2, for example provides only the function of filtering the chroma signal and certainly does not alter to determine it in any way. The comb filter 3 also nothing toward predetermining the frequency of the chroma signal, it just filters it. Neither element referred to by the examiner has anything to do with regard to leakage effects caused by stray coupling as emphasized in amended claim 1 (and 13).

In view of the foregoing, and the amendment of independent method claim 1 (and independent apparatus claim 13), reconsideration of the rejection under 35 USC 102(b) in view of Murakami et al. is believed to be in order and is respectfully requested. Dependent claims 7, 10, 19 and 22 are allowable at least for the same reasons as their respective amended base claims.

Independent Claims 1 (and 13) were also rejected under 35 USC 102(b) as being anticipated by Collette. In applying this rejection to the claims as originally filed, it is stated that the problem undertaken concerns filtering to the clock signal produced by clock 50. It is noted that there is no element at all in this reference that is in any way concerned with leakage to the video processing path, as recited in amended claims 1 and 13, Further there is no element at all in this reference that is in any way concerned with stray capacitances as recited in amended claims 1 and 13.

In view of the foregoing, and the amendment of independent method claim 1 (and independent apparatus claim 13), reconsideration of the rejection under 35 USC 102(b) in view of Collette is believed to

be in order and is respectfully requested. Dependent claims 2, 3, 4, 10, 14, 15, 16 and 22 are allowable at least for the same reasons as their respective base claims.

Independent Claims 1 and 13 were also rejected under 35 USC 102(b) as being anticipated by Martinez. In applying this rejection to Claims 1 and 13 as originally filed, it is stated that the object of this apparatus is to reduce effects of a data signal on a processed video signal. There is, however, nothing in this reference to suggest the limitations of amended Claims 1 (and 13) regarding "leakage" correction nor of "stray" capacitance effects as claimed not of the object of correcting such effects in an economic way as discussed above.

In view of the foregoing, and the amendment of independent method claim 1 (and independent apparatus claim 13), reconsideration of the rejection under 35 USC 102(b) in view of Martinez is believed to be in order and is respectfully requested. Dependent claims 7, 10, 19 and 22 are allowable at least for the same reasons as their respective amended base claims.

Dependent claims 5, 6, 17 and 18 were rejected under 35 USC 103 as being obvious in view of Martinez. Claims 5 and 17 relate to the frequency of the periodic signal as being 36.336 KHz (2.5 multiplied by f_h). Claims 6 and 18 further define the frequency as being rounded to an integral number. In applying the rejections, it is stated that NTSC color is at 455 times f_h. The examiner strangely concludes that since the number 455 is known, that it would be obvious to use an odd multiple of half the line rate. The examiner ignores the specific claimed multiple of 2.5 and the specific claimed rounding limitations.

One of ordinary skill in the art is give no hint of these further claimed features of the invention from Martinez. Further, Martinez has nothing to do with strays and leakage as discussed above which lie, together with the claimed novel specific frequencies and multiples.

In view of the foregoing, and the amendment of independent method claim 1 (and independent apparatus claim 13), dependent claims 5, 6, 17 and 18 are allowable at least for the same reasons as their respective base claims and are additionally allowable on their own merits as well. Accordingly, reconsideration of the rejection under 35 USC 103(b) in view of Martinez is believed clearly to be in order and is respectfully requested.

Dependent claims 8, 9, 11, 12, 20, 21, 23 and 24 were rejected under 35 USC 103 as being obvious in view of Martinez and Vorenkamp et al. Claims 8 and 20 relate to IC applications to solve the stray coupling problem of the present invention, claims 9 and 21 add the further novel features regarding substrate coupling of the strays. Claims 11 and 23 add further features regarding the substrate and claims 12 and 24 further define novel details substrate coupling effects of the invention.

In discussing these claims, the examiner acknowledges that Martinez does not disclose an integrated circuit but concludes that IC applications would be obvious in view of Vorenkamp et al. The examiner's comments have nothing at al. to do with the claimed limitations of these dependent claims. The examiner does not show any reference which relates to correction of leakage effects or stray coupling effects in an IC of a periodic signal as claimed but merely speaks in general terms giving no motivation to one of ordinary skill in the art. All these dependent claims are allowable at least for the same

reasons as their respective base claims and are additionally allowable on their own merits as well in disclosing further features of the invention not shown or suggested by the prior art. Reconsideration and withdrawal of these dependent claims is believed to be in order and is respectfully requested.

With this amendment the number of independent claims (2) is unchanged and the total number of claims (24) is also unchanged. Accordingly, no additional fee is deemed necessary with regard to amendment of the claims.

The application, as amended, is believed to be in condition for allowance and such action is respectfully requested.

Respectfully submitted,

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Certificate of Mailing By
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I hereby certify that I am depositing this paper with the United States Postal Service as first class main on the date indicated below and this paper is addressed to the Assistant Commissioner for Patents, Washington, D.C. 20231.

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Enclosed: Version With Markings To Show Changes Made.

S/N 09/465,038 Filed 12/16/99 Ronald Thomas Keen RCA 89,605

Claim Amendments, Version with markings to show changes made

1. (Once Amended) In a television receiver having a line scanned video display, a method for reducing the visual effects of an artifact in a line scan portion of said [the] video display,

said [the] artifact being attributable to a periodic signal within the video pass band, and being leaked [coupled] to a video processing path of a video circuit in said receiver via stray electrostatic/capacitance coupling, the line scan having frequency of f_h, comprising the steps of:

selecting the frequency of the periodic signal, and

predetermining the frequency of the periodic signal to be and odd harmonic of $f_h/2$.

2. (Once Amended) The method of claim 1 wherein the periodic signal is a clock signal coupled via said stray electrostatic/capacitance coupling [electrostatically/capacitively coupled] to said [the] video circuit.

3. (Once Amended) The method of claim 2 wherein the stray electrostatically/capacitively coupled clock signal is an FM modulating signal of a spread spectrum clock.

4. (Once Amended) The method of claim 2 wherein the stray electrostatically/capacitively coupled clock signal is a carrier signal of a spread spectrum clock.

5. (Once Amended) The method of claim 1 wherein f_h is the NTSC standard horizontal scan frequency of 15,734.26573 Hz and the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is approximately 36.336 KHz (2.5 multiplied by f_h).

6. (Once Amended) The method of claim 5 wherein the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is rounded up or rounded down to an integral number.

7. (Once Amended) The method of claim 1 wherein the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is one of rounded up and rounded down to an integral number.

8. (Once Amended) The method of claim 2 wherein the video circuit, and the stray electrostatically/capacitively coupled periodic signal are included within an integrated circuit having an underlying substrate of semiconductor material.

9. The method of claim 8 wherein the stray electrostatically/capacitively coupling to said video circuit is via respective capacitances coupled to the underlying substrate of said integrated circuit.

10. (Once Amended) The method of claim 1 wherein the periodic signal is a spread spectrum clock signal coupled via said stray

electrostatic/capacitance coupling [electrostatically/capacitively coupled] to said [the] video circuit.

11. (Once Amended) The method of claim 10 wherein the video circuit, and the stray electrostatically/capacitively coupled periodic signal are included within a monolithic integrated circuit having an underlying substrate of semiconductor material.

12. (Once Amended) The method of claim 11 wherein the stray electrostatic coupling is via capacitances to one of the underlying substrate and between component parts of said [the] monolithic integrated circuit.

13. (Once Amended) In a television receiver having a line scanned video display, apparatus for reducing the visual effects of an artifact in a line scan portion of said [the] video display,

said [the] artifact being attributable to a periodic signal within the video pass band, and being leaked [coupled] to a video processing path of a video circuit in said receiver via stray electrostatic/capacitance coupling, the line scan having a frequency of f_h, comprising:

means for selecting the frequency of the periodic signal, and

means for predetermining the frequency of the periodic signal to be and odd harmonic of $f_h/2$.

14. (Once Amended) The apparatus of claim 13 wherein the periodic signal is a clock signal coupled via said stray electrostatic/capacitance coupling [electrostatically/capacitively coupled] to said [the] video circuit.

15. (Once Amended) The apparatus of claim 14 wherein the stray electrostatically/capacitively coupled clock signal is an FM modulating signal of a spread spectrum clock.

16. (Once Amended) The apparatus of claim 14 wherein the stray electrostatically/capacitively coupled clock signal is a carrier signal of a spread spectrum clock.

17. (Once Amended) The apparatus of claim 13 wherein f_h is the NTSC standard horizontal scan frequency of 15,734.26573 Hz and the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is approximately 36.336 KHz (2.5 multiplied by f_h).

18. (Once Amended) The apparatus of claim 17 wherein the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is rounded up or rounded down to an integral number.

19. (Once Amended) The apparatus of claim 13 wherein the predetermined fundamental frequency of the periodic signal that is coupled by said stray electrostatic/capacitance coupling is one of rounded up and rounded down to an integral number.

20. (Once Amended) The apparatus of claim 14 wherein the video circuit, and the stray electrostatically/capacitively coupled periodic signal are included within an integrated circuit having an underlying substrate of semiconductor material.

21. (Once Amended) The apparatus of claim 20 wherein the stray electrostatically/capacitively coupling to said video circuit is via respective capacitances coupled to the underlying substrate of said integrated circuit.

22. (Once Amended) The apparatus of claim 13 wherein the periodic signal is a spread spectrum clock signal coupled via said stray electrostatic/capacitance coupling [electrostatically/capacitively coupled] to said [the] video circuit.

23. (Once Amended) The apparatus of claim 22 wherein the video circuit, and the stray electrostatically/capacitively coupled periodic signal are included within a monolithic integrated circuit having an underlying substrate of semiconductor material.

24. (Once Amended) The apparatus of claim 23 wherein the stray electrostatic coupling is via capacitances to one of the underlying substrate and between component parts of said [the] monolithic integrated circuit.